

One Water One Watershed: Responding to Water Challenges



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Santa Ana Watershed Project Authority (SAWPA)



Basic Watershed Facts



- **Over 2,650 Square Miles**
- **Over 5 Million Residents (2000 Census)**
- **Portions of 4 Counties**
 - **Orange County**
 - **Riverside County**
 - **San Bernardino County**
 - **Los Angeles County**



The Santa Ana River Watershed

Mojave Desert

San
Gabriel
Mtns..

San Bernardino Mtns.

Chino
Basin

San
Bernardino
Basin

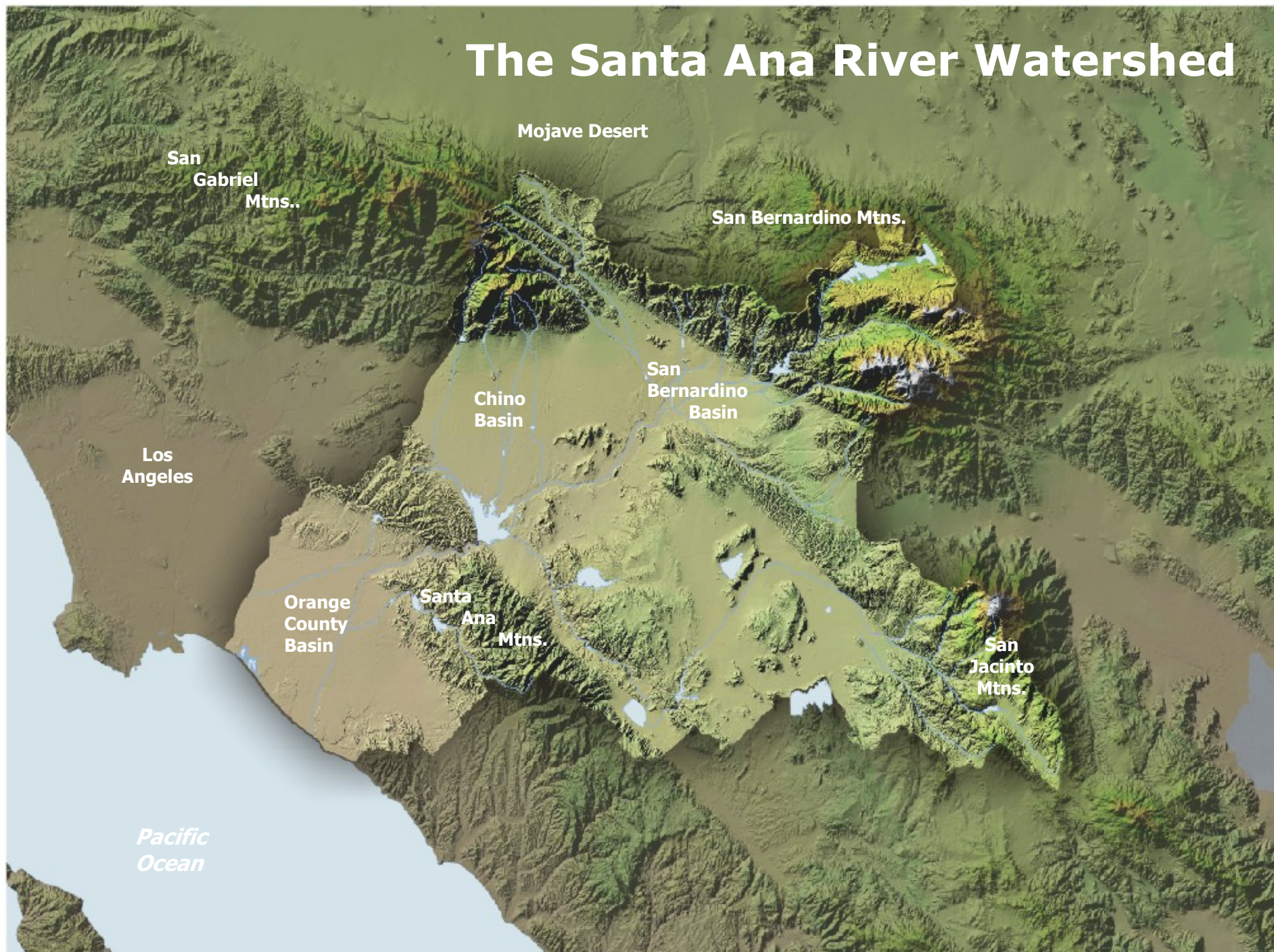
Los
Angeles

Orange
County
Basin

Santa
Ana
Mtns.

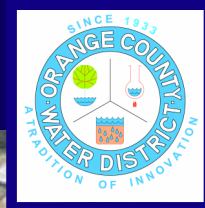
San
Jacinto
Mtns.

*Pacific
Ocean*



Santa Ana Watershed Project Authority (SAWPA)

SAWPA Member Agencies & Other Stakeholders



Other Stakeholders

- 97 Water-related Agencies
- 4 Counties
- 59 Cities
- State water, environmental, and regulatory agencies
- Federal Agencies
- Other Special Districts
- Special Interest Groups



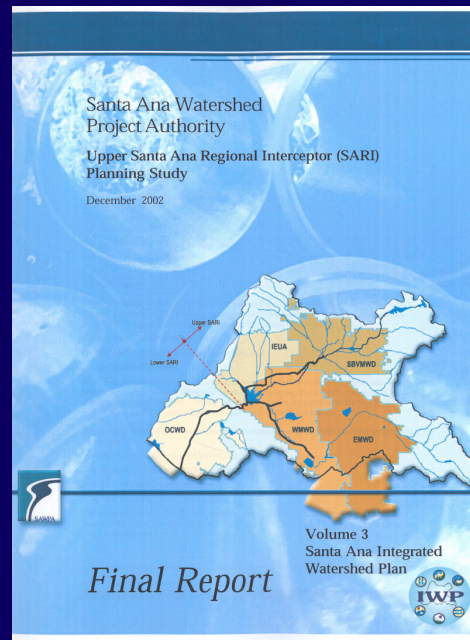
Integrated Watershed Plan



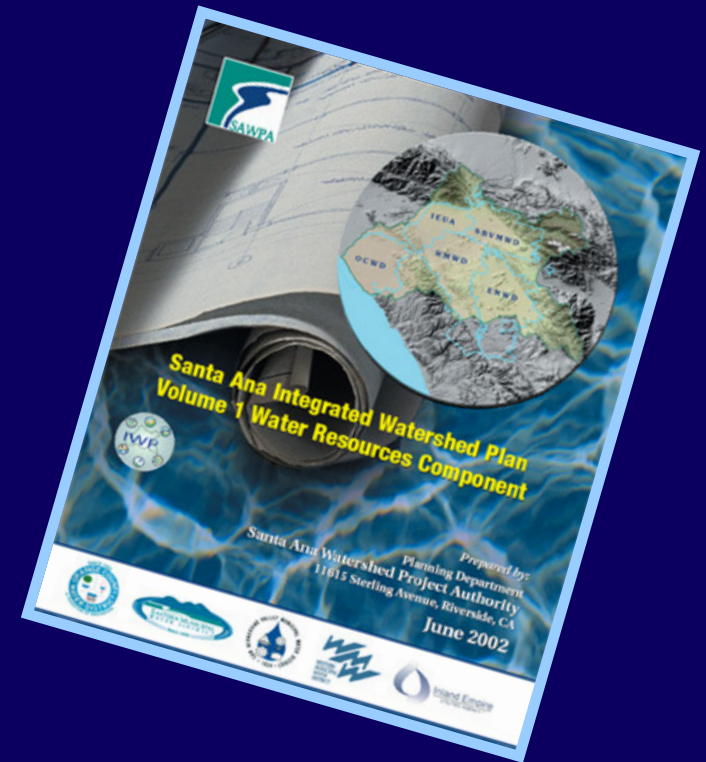
**A collaboration of all watershed stakeholders
to plan:**



**Vol. 2 - Wetlands &
Environment**



**Vol. 3 - Brine Line
(SARI) Use**



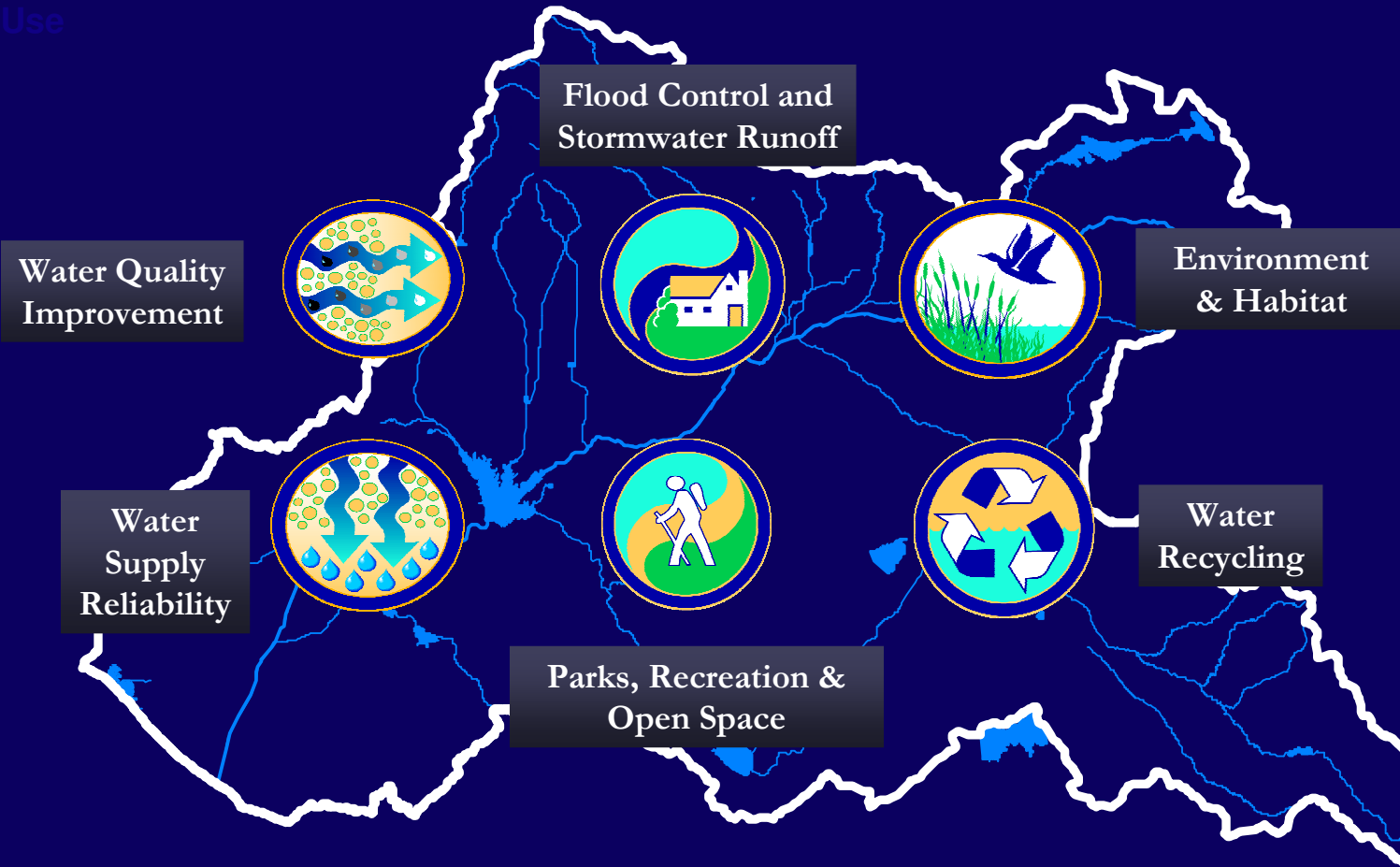
**Vol. 1 -Water
Resources**



Integration of Water Resource Project Categories



Land Use



SAWPA Integrated Watershed Program



**SAWPA IRWMP served as template
for introducing IRWM Plans statewide**

**\$235 million from Prop 13 Water Bond, So Cal IWP
\$25 million from Prop 50 Water Bond, Chapter 8, IRWMP
for the Santa Ana Watershed**

**APA
Outstanding
Planning Award**

**ACWA Clair A.
Hill Award**

**EPA Clean
Water Partner**



Santa Ana Watershed “One Water One Watershed” Integrated Plan– New Water Threats



Four Horsemen of the Apocalypse

Climate Change

Reduced Water from Delta



Colorado River Basin Drought

Explosive Development & Population growth



One Water One Watershed (OWOW)



The “**Next Generation**” of Integrated
Regional Water Management Planning
for Santa Ana Region



Value of the Process



- Capitalizes on existing excellent expertise
- Engenders a collaborative **“big tent”** approach to solving problems
- Prioritizes watershed scale problem solving
- Each dollar is leveraged
- Interregional multi-benefit among “water resource strategies” (pillars)



Integration of the Water Pillars



OWOW Steering Committee



**Garry Brown -
Environmental**



**Ali Sahabi -
Development**



**Marion Ashley –
Riverside Co.**



**Bill Campbell -
Orange Co.**



**Josie Gonzales -
San Bernardino
Co.**



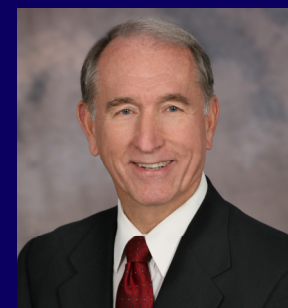
**Ron Sullivan –
SAWPA Chair**



**Wyatt Troxel –
SAWPA Vice Chair**



**Ron Loveridge -
City of Riverside**



**Pat Morris – City of
San Bernardino**



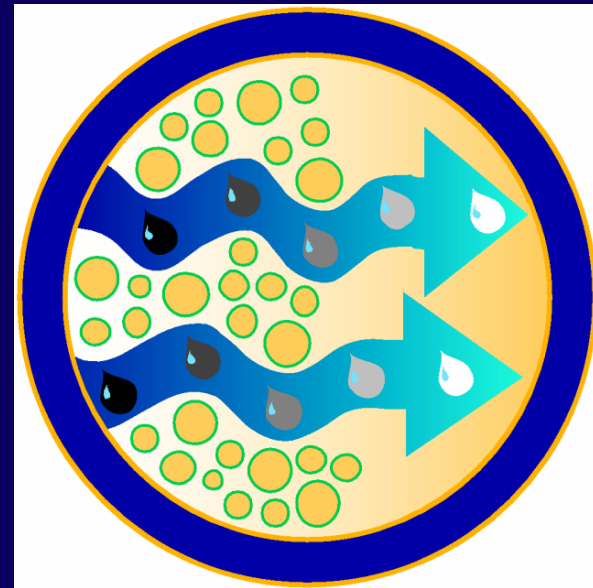
**Beth Krom –
City of Irvine**



Water Quality Improvement Pillar – Includes addressing NPS pollution



- SAWPA “One Water One Watershed” IRWMP includes detailed planning by multi-agency task forces formed to address NPS and Total Maximum Daily Loads (TMDL)
- SAWPA administers these TMDL task forces



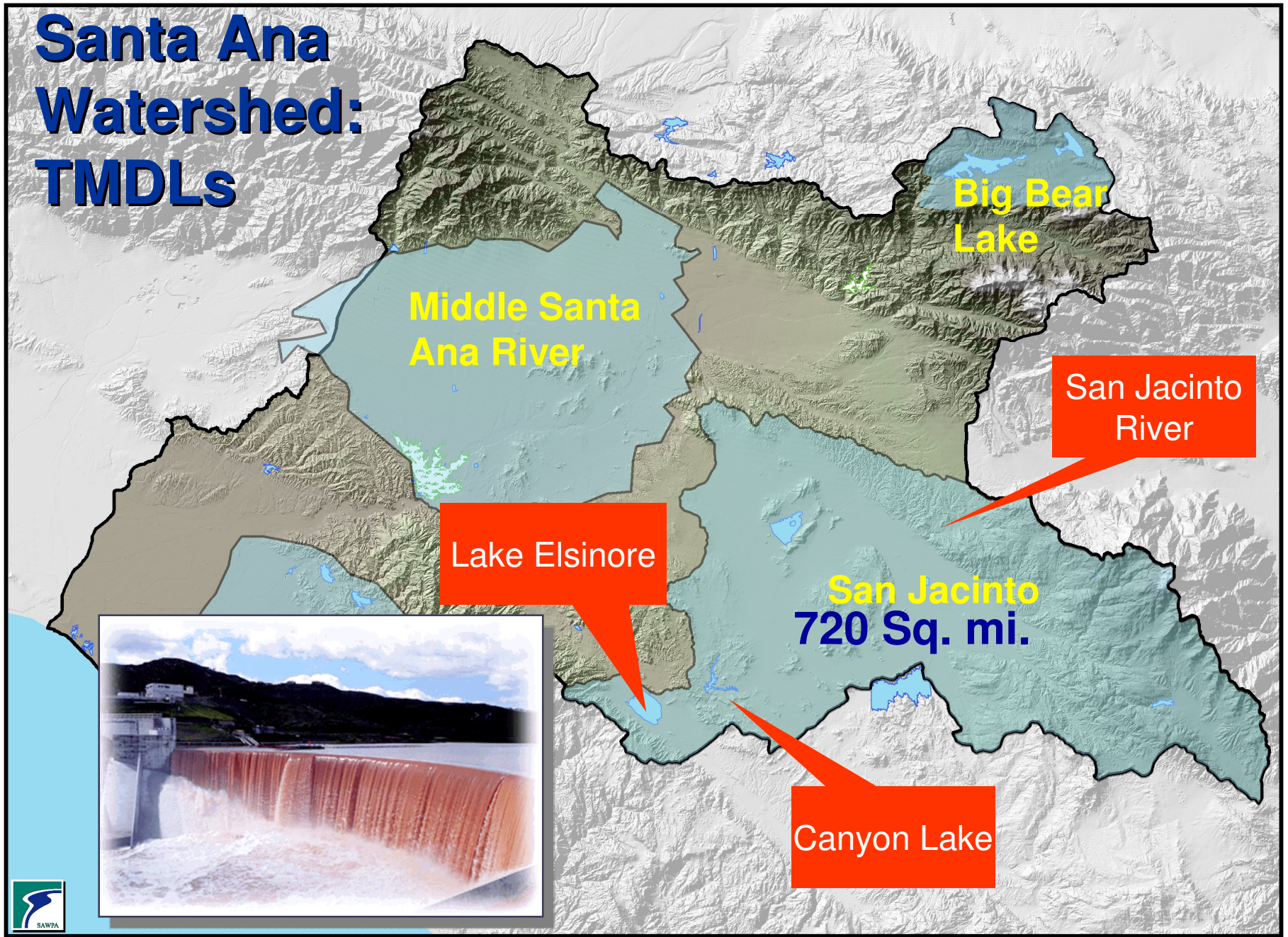
Santa Ana Watershed: TMDLs

The map displays the Santa Ana Watershed divided into several sub-watersheds, each with a distinct color and boundary. The sub-watersheds shown are:

- Middle Santa Ana River** (Light blue)
- San Jacinto** (Dark blue, labeled **720 Sq. mi.**)
- San Jacinto River** (Red)
- Big Bear Lake** (Yellow)
- Lake Elsinore** (Red)
- Canyon Lake** (Red)

An inset photograph in the bottom left corner shows a large concrete dam with water cascading over its spillways, set against a backdrop of green hills and a blue sky.

SAWPA

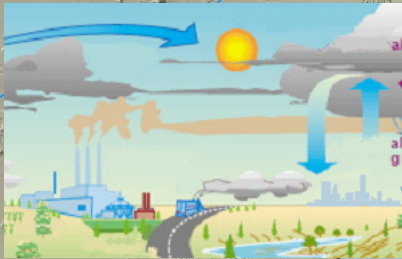


Water Quality Issues:

Moreno Valley



Possible Non Point Sources:



Atmospheric Deposition



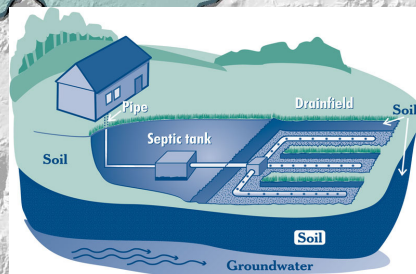
Dairies



Agriculture



Development



Septic Systems



Forest

Lake Elsinore and Canyon Lake TMDL Timeline:



- 1994** – Regional Board lists Lake Elsinore as an impaired water body
- 1998** – Canyon Lake added to the list of impaired waters
- 2000** – Regional Board initiates TMDL development process for Lake Elsinore and Canyon Lake and San Jacinto TMDL Workgroup formed (SAWPA as administrator)
- 2004** – Regional Board issues Lake Elsinore and Canyon Lake nutrient TMDL report
- 2005** – EPA Adopts Lake Elsinore and Canyon Lake nutrient TMDLs
- 2006** – Lake Elsinore and Canyon Lake TMDL Task Force Agreement finalized



TMDL Task Force Agreement



- Formed in June 2006 and signed by 23 agencies
- SAWPA serves as administrator
- Reduces compliance costs with implementing new RWQCB TMDL
- Current tasks include monitoring, analysis, studies and strategic planning



LE/CL TMDL Task Force Agencies



- **US Forest Service:**
 - San Bernardino and Cleveland National Forest Management Zones
- **March Air Base JPA**
- **State of California**
 - Department of Fish and Game
 - Department of Transportation
- **County of Riverside**
 - Flood Control and Water Conservation District
 - DAMP Program Co-permittees

Cities:

| | | |
|-----------------------|-----------------------|---------------------|
| – City of Beaumont | City of Lake Elsinore | City of Perris |
| – City of Canyon Lake | City of Moreno Valley | City of Riverside |
| – City of Hemet | City of Murrieta | City of San Jacinto |
- **Water Agencies:**
 - Eastern Municipal Water District
 - Elsinore Valley Municipal Water District
- **Agriculture:**
 - UC Cooperative Extension
 - Farm Bureau
 - Agricultural Operators
 - Concentrated Animal Feeding Operators
- **Cooperating Agencies:**
 - Santa Ana RWQCB
 - San Jacinto River Watershed Council
 - Lake Elsinore & San Jacinto Watersheds Authority



TMDL Task Force: Purpose



- Review and develop recommendations to update the TMDL Basin Plan Amendment based on the best available scientific information
- Implement TMDL Implementation Plan Tasks identified within the Task Force agreement
- Propose appropriate revisions to the TMDL Basin Plan Amendment
- De-List Lake Elsinore and Canyon Lake



TMDL Task Force: Adaptive Approach



- Revised Waste Discharge Requirements
- Comprehensive TMDL Nutrient Monitoring Program
- Watershed Management Plans for:
 - Agriculture/Dairy
 - Urban Discharges
 - Forest Area
 - On-site Disposal/Septic System
 - Lake Sediment Nutrient Reduction
- Pollutant Trading
- Tri-annually Review & Revise TMDL



TMDL Task Force: Summary



- **Builds upon the previous efforts of the Regional Board and Stakeholders**
- **Establishes a formal cost sharing agreement among Stakeholders**
- **Includes the Regional Board as a partner and signatory to Task Force Agreement**
- **Provides numerous benefits to both Stakeholders and the Regional Board**
- **Provides a proven framework to solve water quality issues**



TMDL Task Force: Benefits



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LAKE ELSINORE AERATION SYSTEM

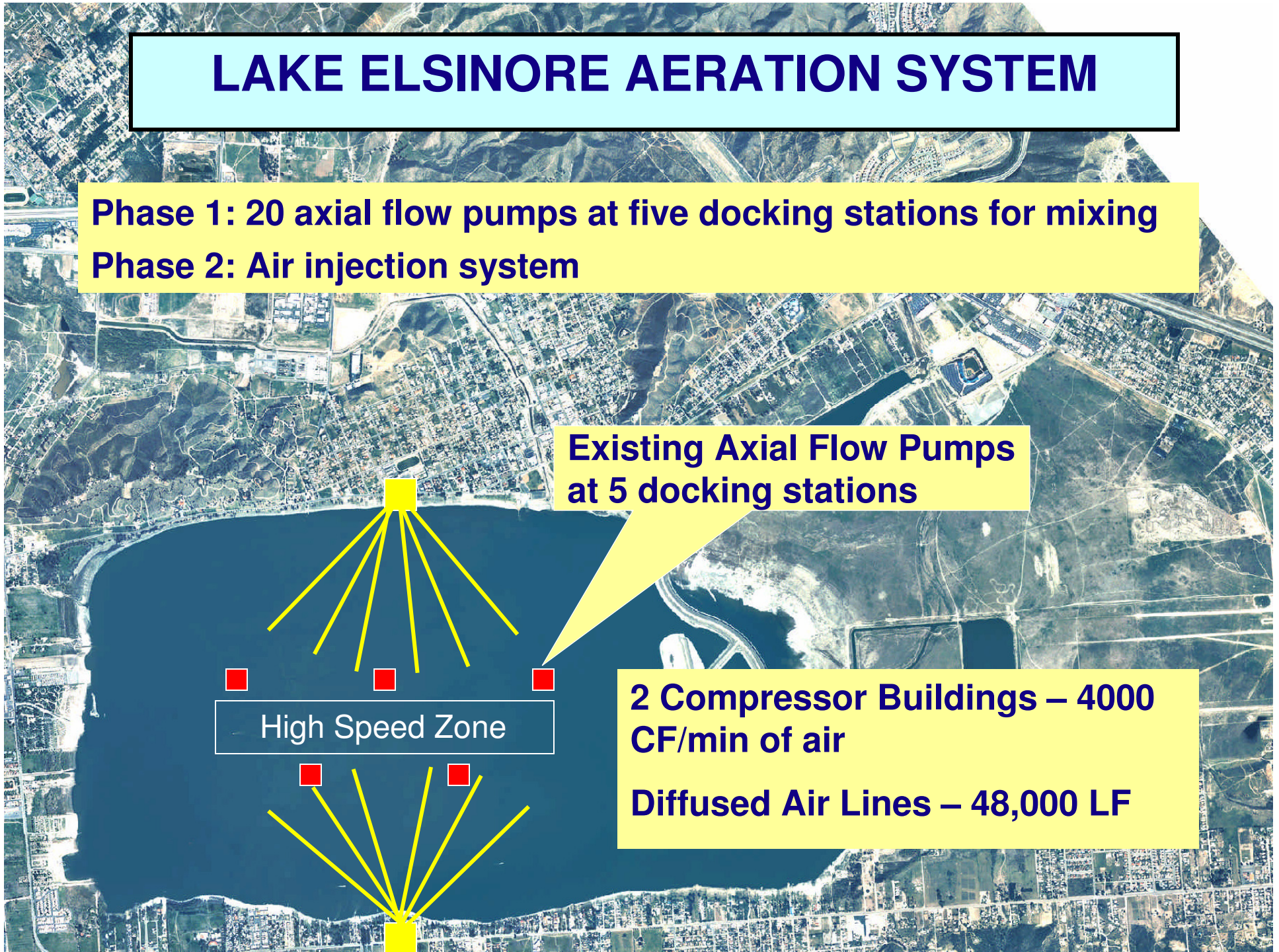
Phase 1: 20 axial flow pumps at five docking stations for mixing
Phase 2: Air injection system

**Existing Axial Flow Pumps
at 5 docking stations**

High Speed Zone

**2 Compressor Buildings – 4000
CF/min of air**

Diffused Air Lines – 48,000 LF



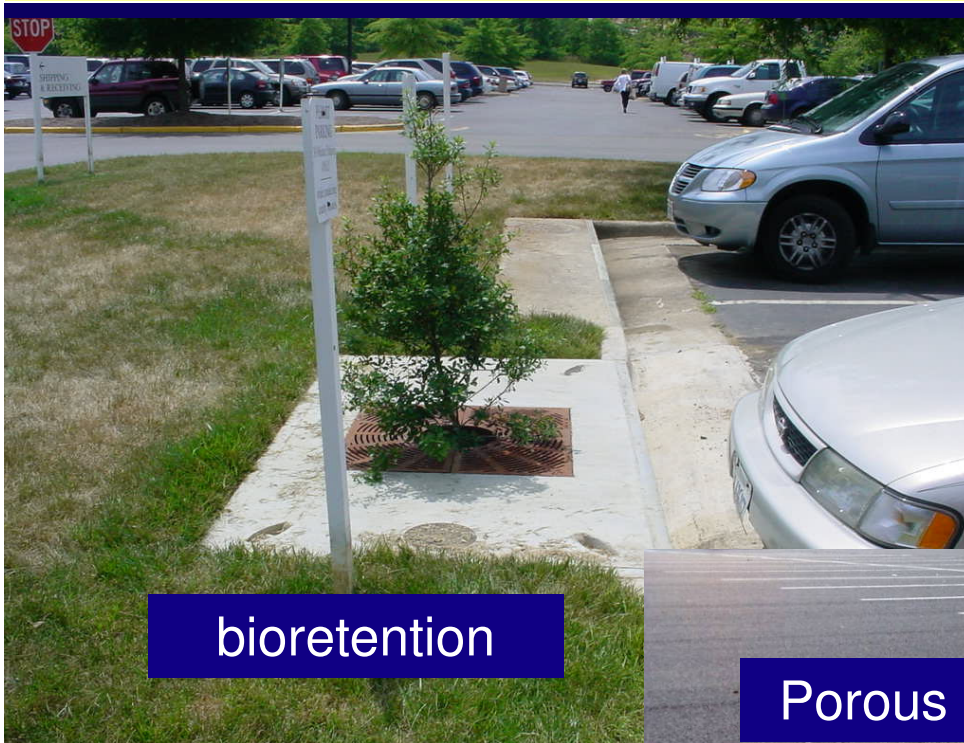
Treatment Plant Nutrient Removal and Recycled Water Delivery



- Lake loses 4 ft each year due to evaporation
- Treated recycled water delivered to lake for lake level stabilization (Current delivery 4 MGD)



Future Upper Watershed Projects – Capture and Treat Stormflow Onsite



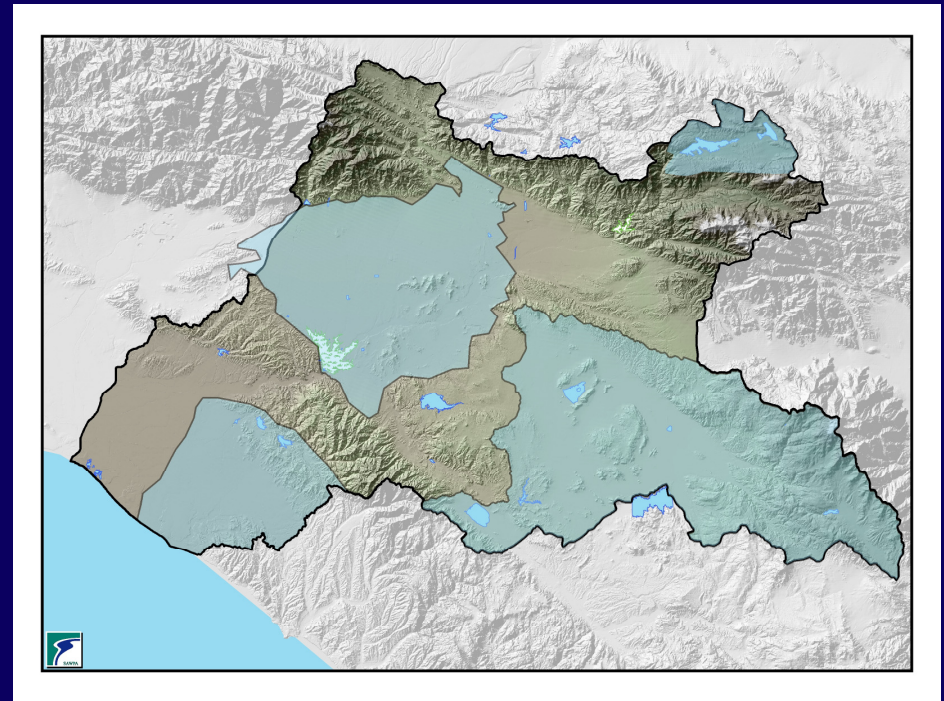
Upper Watershed: Transforming impervious areas for recharge and flood control



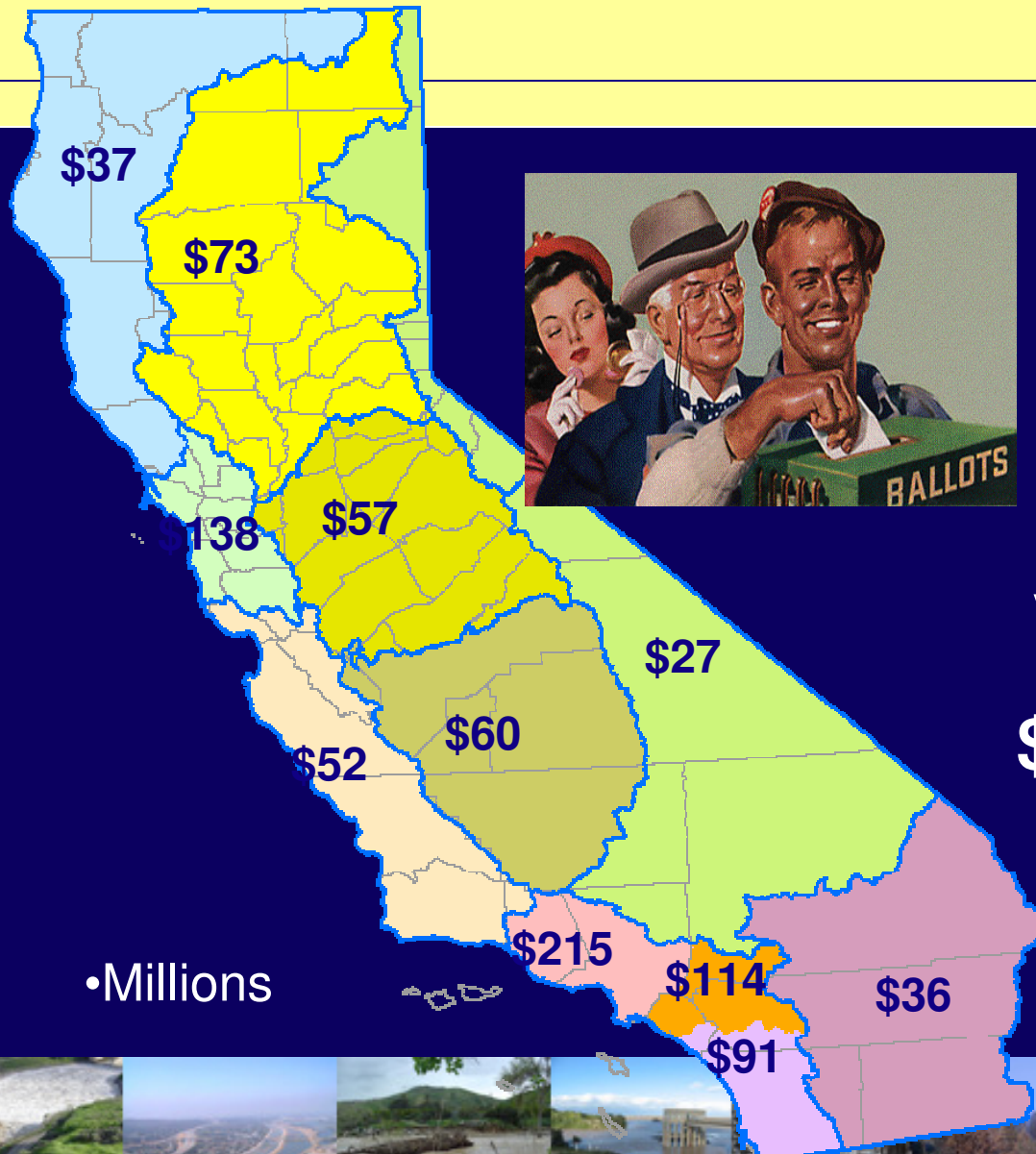
Input into OWOW IRWMP



Planning and projects
of all TMDL task
forces will fold into
SAWPA's "One Water
One Watershed"
IRWMP



Future Funding for SAWPA's IRWMP



Prop 84 passed by
voters in Nov. 2006

**\$114 Million for Santa
Ana Region**

•Millions



Propositions 84, 1E, 1C



- \$275 M for flood control projects
- \$45 M for Santa Ana River Parkway 3 counties
- \$25 M for stream and river restoration
- \$90 M for stormwater pollution prevention
- \$135 M for threatened species habitat restoration
- \$90 M for beaches, bays, and coastal waters
- \$90 M for water conservation, water quality

Prop 1C includes \$850 M for water, sewer, parks

Prop 1E includes \$290 M for flood control



To Do Today



www.sawpa.org & click on OWOW water drop

